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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/823,964A

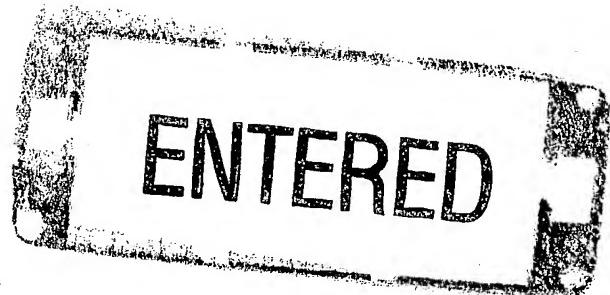
DATE: 09/24/2004

TIME: 10:57:26

Input Set : A:\SEQLIST1a.TXT

Output Set: N:\CRF4\09242004\J823964A.raw

4 <110> APPLICANT: BAM, NARENDRA
 5 BONGERS, JACOB
 6 KIRKPATRICK, ROBERT B.
 7 JANSON, CHERYL A.
 8 JOHANSON, KYUNG
 9 QIU, XIANYANG
 10 YEH, PING
 12 <120> TITLE OF INVENTION: CONJUGATES COMPRISING HUMAN IL-18 AND
 13 SUBSTITUTION MUTANTS THEREOF
 16 <130> FILE REFERENCE: PU60053
 18 <140> CURRENT APPLICATION NUMBER: 10/823,964A
 19 <141> CURRENT FILING DATE: 2004-04-14
 21 <150> PRIOR APPLICATION NUMBER: 60/462,947
 22 <151> PRIOR FILING DATE: 2003-04-15
 24 <160> NUMBER OF SEQ ID NOS: 28
 26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 28 <210> SEQ ID NO: 1
 29 <211> LENGTH: 157
 30 <212> TYPE: PRT
 31 <213> ORGANISM: Homo sapiens
 33 <400> SEQUENCE: 1
 34 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
 35 1 5 10 15
 36 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
 37 20 25 30
 38 Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
 39 35 40 45
 40 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
 41 50 55 60
 42 Ser Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
 43 65 70 75 80
 44 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
 45 85 90 95
 46 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
 47 100 105 110
 48 Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
 49 115 120 125
 50 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
 51 130 135 140
 52 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
 53 145 150 155
 56 <210> SEQ ID NO: 2
 57 <211> LENGTH: 157



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58 <212> TYPE: PRT
 59 <213> ORGANISM: Mus musculus
 61 <400> SEQUENCE: 2
 62 Asn Phe Gly Arg Leu His Cys Thr Thr Ala Val Ile Arg Asn Ile Asn
 63 1 5 10 15
 64 Asp Gln Val Leu Phe Val Asp Lys Arg Gln Pro Val Phe Glu Asp Met
 65 20 25 30
 66 Thr Asp Ile Asp Gln Ser Ala Ser Glu Pro Gln Thr Arg Leu Ile Ile
 67 35 40 45
 68 Tyr Met Tyr Lys Asp Ser Glu Val Arg Gly Leu Ala Val Thr Leu Ser
 69 50 55 60
 70 Val Lys Asp Ser Lys Met Ser Thr Leu Ser Cys Lys Asn Lys Ile Ile
 71 65 70 75 80
 72 Ser Phe Glu Glu Met Asp Pro Pro Glu Asn Ile Asp Asp Ile Gln Ser
 73 85 90 95
 74 Asp Leu Ile Phe Phe Gln Lys Arg Val Pro Gly His Asn Lys Met Glu
 75 100 105 110
 76 Phe Glu Ser Ser Leu Tyr Glu Gly His Phe Leu Ala Cys Gln Lys Glu
 77 115 120 125
 78 Asp Asp Ala Phe Lys Leu Ile Leu Lys Lys Asp Glu Asn Gly Asp
 79 130 135 140
 80 Lys Ser Val Met Phe Thr Leu Thr Asn Leu His Gln Ser
 81 145 150 155
 84 <210> SEQ ID NO: 3
 85 <211> LENGTH: 203
 86 <212> TYPE: PRT
 87 <213> ORGANISM: Homo sapiens
 89 <400> SEQUENCE: 3
 90 Met His His His His His Thr Arg Gly Met Ala Ala Glu Pro Val
 91 1 5 10 15
 92 Glu Asp Asn Cys Ile Asn Phe Val Ala Met Lys Phe Ile Asp Asn Thr
 93 20 25 30
 94 Leu Tyr Phe Ile Ala Glu Asp Asp Glu Asn Leu Glu Ser Asp Tyr Phe
 95 35 40 45
 96 Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn Asp Gln
 97 50 55 60
 98 Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp Met Thr
 99 65 70 75 80
 100 Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile Ser
 101 85 90 95
 102 Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile Ser Val
 103 100 105 110
 104 Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile Ile Ser
 105 115 120 125
 106 Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys Ser Asp
 107 130 135 140
 108 Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys Met Gln
 109 145 150 155 160
 110 Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu Lys Glu

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113 165 170 175
 114 Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu Gly Asp
 115 180 185 190
 116 Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
 117 195 200
 120 <210> SEQ ID NO: 4
 121 <211> LENGTH: 157
 122 <212> TYPE: PRT
 123 <213> ORGANISM: Homo sapiens
 125 <220> FEATURE:
 126 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of this human IL-18
 127 sequence has been replaced with Serine.
 129 <400> SEQUENCE: 4
 130 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
 131 1 5 10 15
 132 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
 133 20 25 30
 134 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
 135 35 40 45
 136 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
 137 50 55 60
 138 Ser Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
 139 65 70 75 80
 140 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
 141 85 90 95
 142 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
 143 100 105 110
 144 Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
 145 115 120 125
 146 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
 147 130 135 140
 148 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
 149 145 150 155
 152 <210> SEQ ID NO: 5
 153 <211> LENGTH: 157
 154 <212> TYPE: PRT
 155 <213> ORGANISM: Homo sapiens
 157 <220> FEATURE:
 158 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of this human IL-18
 159 sequence has been replaced with Serine, the Cysteine at
 160 position 68 has been replaced with Aspartic acid, and the
 161 Asparagine at position 78 has been replaced with Cysteine.
 163 <400> SEQUENCE: 5
 164 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
 165 1 5 10 15
 166 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
 167 20 25 30
 168 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
 169 35 40 45

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170 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
 171 50 55 60
 173 Ser Val Lys Asp Glu Lys Ile Ser Thr Leu Ser Cys Glu Cys Lys Ile
 174 65 70 75 80
 175 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
 176 85 90 95
 177 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
 178 100 105 110
 179 Met Gln Phe Glu Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
 180 115 120 125
 181 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
 182 130 135 140
 183 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
 184 145 150 155
 187 <210> SEQ ID NO: 6
 188 <211> LENGTH: 157
 189 <212> TYPE: PRT
 190 <213> ORGANISM: Homo sapiens
 192 <220> FEATURE:
 193 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of thi human IL-18
 194 sequence has been replaced with Serine, the Cysteine at
 195 position 68 has been replaced with Aspartic acid, and the
 196 Glutamic acid at position 121 has been replaced with Cysteine.
 198 <400> SEQUENCE: 6
 199 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
 200 1 5 10 15
 201 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
 202 20 25 30
 203 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
 204 35 40 45
 205 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
 206 50 55 60
 207 Ser Val Lys Asp Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
 208 65 70 75 80
 209 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
 210 85 90 95
 211 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
 212 100 105 110
 213 Met Gln Phe Glu Ser Ser Ser Tyr Cys Glu Gly Tyr Phe Leu Ala Cys Glu
 214 115 120 125
 215 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
 216 130 135 140
 217 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
 218 145 150 155
 221 <210> SEQ ID NO: 7
 222 <211> LENGTH: 157
 223 <212> TYPE: PRT
 224 <213> ORGANISM: Homo sapeins
 226 <220> FEATURE:

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227 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of this human IL-18 sequence

228 has been replaced with Serine, the Cysteine at position 68 has
229 been replaced with Aspartic acid, and the Leucine at position 144
230 has been replaced with Cysteine.

232 <400> SEQUENCE: 7

233	Tyr	Phe	Gly	Lys	Leu	Glu	Ser	Lys	Leu	Ser	Val	Ile	Arg	Asn	Leu	Asn
234	1				5				10			15				
235	Asp	Gln	Val	Leu	Phe	Ile	Asp	Gln	Gly	Asn	Arg	Pro	Leu	Phe	Glu	Asp
236					20				25			30				
237	Met	Thr	Asp	Ser	Asp	Ser	Arg	Asp	Asn	Ala	Pro	Arg	Thr	Ile	Phe	Ile
238					35				40			45				
239	Ile	Ser	Met	Tyr	Lys	Asp	Ser	Gln	Pro	Arg	Gly	Met	Ala	Val	Thr	Ile
240					50				55			60				
241	Ser	Val	Lys	Asp	Glu	Lys	Ile	Ser	Thr	Leu	Ser	Cys	Glu	Asn	Lys	Ile
242	65						70			75			80			
243	Ile	Ser	Phe	Lys	Glu	Met	Asn	Pro	Pro	Asp	Asn	Ile	Lys	Asp	Thr	Lys
244					85				90			95				
245	Ser	Asp	Ile	Ile	Phe	Phe	Gln	Arg	Ser	Val	Pro	Gly	His	Asp	Asn	Lys
246					100				105			110				
247	Met	Gln	Phe	Glu	Ser	Ser	Ser	Tyr	Glu	Gly	Tyr	Phe	Leu	Ala	Cys	Glu
248					115				120			125				
249	Lys	Glu	Arg	Asp	Leu	Phe	Lys	Leu	Ile	Leu	Lys	Lys	Glu	Asp	Glu	Cys
250					130				135			140				
251	Gly	Asp	Arg	Ser	Ile	Met	Phe	Thr	Val	Gln	Asn	Glu	Asp			
252	145				150				155							

255 <210> SEQ ID NO: 8

256 <211> LENGTH: 157

258 <212> TYPE: PRT

259 <213> ORGANISM: Homo sapiens

261 <220> FEATURE:

262 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of the human IL-18 sequence

263 has been replaced with Serine, the Cysteine at position 68 has
264 been replaced with Aspartic acid, and Aspartic acid at position
266 157 has been replaced with Cysteine.

268 <400> SEQUENCE: 8

269	Tyr	Phe	Gly	Lys	Leu	Glu	Ser	Lys	Leu	Ser	Val	Ile	Arg	Asn	Leu	Asn
270	1				5				10			15				
271	Asp	Gln	Val	Leu	Phe	Ile	Asp	Gln	Gly	Asn	Arg	Pro	Leu	Phe	Glu	Asp
272					20				25			30				
273	Met	Thr	Asp	Ser	Asp	Ser	Arg	Asp	Asn	Ala	Pro	Arg	Thr	Ile	Phe	Ile
274					35				40			45				
275	Ile	Ser	Met	Tyr	Lys	Asp	Ser	Gln	Pro	Arg	Gly	Met	Ala	Val	Thr	Ile
276					50				55			60				
277	Ser	Val	Lys	Asp	Glu	Lys	Ile	Ser	Thr	Leu	Ser	Cys	Glu	Asn	Lys	Ile
278	65						70			75			80			
279	Ile	Ser	Phe	Lys	Glu	Met	Asn	Pro	Pro	Asp	Asn	Ile	Lys	Asp	Thr	Lys
280					85				90			95				
281	Ser	Asp	Ile	Ile	Phe	Phe	Gln	Arg	Ser	Val	Pro	Gly	His	Asp	Asn	Lys
282					100				105			110				

VERIFICATION SUMMARY
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